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Serial No. 10/712,484
Response to Official Action

In the Drawings

There are no amendments to the Drawings.

Remarks

Applicant has amended claims 1, 6 – 8, 12, 30, 38, 49, 59 and 60. Applicant respectfully submits that no new matter was added by the amendment, as all of the amended matter was either previously illustrated or described in the drawings, written specification and/or claims of the present application. Entry of the amendment and favorable consideration thereof is earnestly requested.

The Examiner has rejected Claims 6 – 8 and 13 – 16 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner has further rejected Claims 1, 3 – 4, 10 – 16 and 18 - 19 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 3,573,229 to Herbst (“the ‘229 patent”). The Examiner has also rejected Claim 60 under 35 U.S.C. §102(b) as anticipated by U.S. Publish Patent Application No. 2002/0084844 to Takahashi et al. (“the ‘844 application”). The Examiner has still further rejected Claims 1, 3 – 4, 10, 18 – 20, 23, 27 – 34, 36 – 38, 40 – 42 and 45 under 35 U.S.C. §102(b) as anticipated by German Patent No. 4,330,437 to Wienand et al. (“the ‘437 patent”). The Examiner has still further rejected Claims 1, 3 – 4, 10, 18 – 20, 23, 27 – 34, 36 – 38, 40 – 42 and 45 under 35 U.S.C. §103(a) as being unpatentable over the ‘437 patent. The Examiner has yet further rejected Claims 11 – 17, 22, 43 – 47, 49 – 54 and 56 – 58 under 35 U.S.C. §103(a) as being unpatentable over the ‘437 patent in view of U.S. Patent No. 6,341,892 to Schmermund (“the ‘892 patent”). The Examiner has still further rejected Claims 21, 24 – 26 and 59 under 35 U.S.C. §103(a) as being unpatentable over the ‘437 patent in view of the ‘844 application. The Examiner has yet

further rejected Claim 5 under 35 U.S.C. §103(a) as being unpatentable over the '437 patent in view of U.S. Patent No. 6,081,182 to Tomozawa et al. ("the '182 patent"). These rejections are respectfully traversed.

35 U.S.C. §112, Second Paragraph Rejections

Applicant has amended Claims 6 – 8 and 12 in response to the Examiner's 112 rejections.

35 U.S.C. §102(b) Rejections

As amended Claims 1, 30, 38, 49 and 59 all require among other limitations, a substrate formed with a thin insulating coating from at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these. This limitation is not disclosed in any of the cited references and therefore none of the cited references can anticipate Claims 1, 30, 38, 49 and 59.

As amended, Claim 60 requires among other limitations, a first transmit lead comprising at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these electrically connected to the first conductor. This limitation is not disclosed in any of the cited references and therefore none of the cited references can anticipate Claim 60.

35 U.S.C. §103(a) Rejections

None of the cited prior art teach, disclose or suggest a substrate formed with a thin insulating coating from at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these as required by Claims 1, 30, 38, 49 and 59.

It is well settled that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Applicant respectfully submits that there is no suggestion in either reference to combine as suggested by the Examiner.

The '437 patent teaches that "a thin-layer resistor made of a platinum-rhodium alloy" is positioned on "a ceramic substrate." (abstract). Nowhere does The '437 patent teach, disclose or suggest that the substrate has a thin insulating coating formed from at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these as required by Claims 1, 30, 38, 49 and 59. Applicant further submits that the '182 patent also fails to teach, disclose or suggest this limitation. Rather, the '182 patent teaches that the "thermo-sensitive film" and the "anti-diffusion film" "is an oxide of corundum crystalline structure prepared from Al_2O_3 alone or a solid solution Al_2O_3 with Cr, Fe, or both Cr and Fe incorporated therein and represented by the formula $(\text{Al}_{1-x-y}\text{Cr}_x\text{Fe}_y)_2\text{O}_3$." (Col. 5, lines 30 – 44). Nowhere however, does the '182 patent teach or suggest that either of these layers may be formed from at least one noble metal and an oxide selected from the group

consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these. The Examiner has submitted that the '182 patent teaches "a thin insulating film having the same or similar materials as the temperature sensor at cols. 5 – 6, lines 65 – 12, for the purpose of protecting the sensing film from diffusion so that it would have been obvious to form a layer formed of the same material as the sensing portion of Wienand in order to protect the sensor from contaminants or diffusion from an underlying electrode layer." (Official Action, p. 6). Applicant notes however, that Claims 1, 30, 38, 49 and 59 include the specific limitations of the substrate comprising at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these. The limitation is not simply broadly claiming the substrate as the same material as the resistor as the Examiner is suggesting, rather there is a very specific group of materials identified in Claims 1, 30, 38, 49 and 59, which are not taught, disclosed or suggested in the '182 patent. In fact, the '182 patent actually teaches away from this limitation identifying a very different group of materials as listed above.

Accordingly, even if one were to combine the '437 patent with the '182 patent as suggested, one would arrive at "a thin-layer resistor made of platinum-rhodium alloy on a ceramic substrate" with a film on the substrate that comprises "an oxide of corundum crystalline structure prepared from Al_2O_3 alone or a solid solution Al_2O_3 with Cr, Fe, or both Cr and Fe incorporated therein and represented by the formula $(\text{Al}_{1-x-y}\text{Cr}_x\text{Fe}_y)_2\text{O}_3$." ('447 patent, abstract; '182 patent Col. 5, lines 30 – 44). First, one would have to

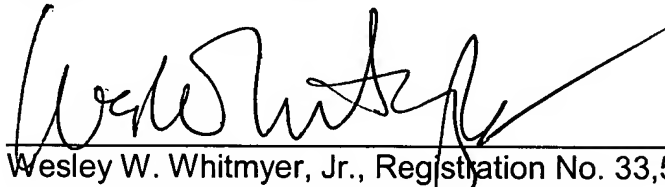
modify the resistor to include an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these. Then, one would have to further modify the film to comprise at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these. Applicant respectfully submits that it is not obvious to disregard the teachings of the '182 patent to replace the film composition with that of the claimed invention, which is not disclosed in any cited reference.

Accordingly, because none of the cited references teach, disclose or suggest, a film formed from at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these as required by Claims 1, 30, 38, 49 and 59, no combination of the cited references can render these claims obvious

Claim 60 requires among other limitations, a first transmit lead comprising at least one noble metal and an oxide selected from the group consisting of: yttrium oxide, cerium oxide, zirconium oxide, and combinations of these electrically connected to the first conductor and an outer layer within which said insulating layer is located, said outer layer comprising the same material as said first transmit lead. Applicant submits that this limitation is not taught or disclosed in any of the cited references and therefore no combinations of the cited references can render Claim 60 obvious.

It is respectfully submitted that claims 1 – 4 and 6 – 60, all of the claims remaining in the application, are in order for allowance and early notice to that effect is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Wesley W. Whitmyer, Jr.', is written over a horizontal line.

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